Title (en)

EXTERNALLY HEATED, REGENERATIVE HOT AND COLD MACHINE

Title (de)

AUSSENBEHEIZTE, REGENERATIVE WÄRME- UND KÄLTEMASCHINE

Title (fr)

MACHINE THERMIQUE ET FRIGORIFIQUE A REGENERATION ET CHAUFFEE PAR L'EXTERIEUR

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Application

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Abstract (en)

[origin: WO9215826A1] The invention concerns an externally heated, regenerative hot and cold machine which operates on the Vuilleumier circuit process and in which the chambers of variable volume and the elements (K) separating the chambers are designed as a rotary piston machine. According to the invention, the rotary piston of the rotary piston machine is a driveless rotating piston (2) arranged in a pressure vessel (1) containing the chambers (6-9) and rotatably mounted about its horizontal longitudinal axis (1''). The pressure vessel is made of material of high density or is filled with a material of high density. Loads (21) are arranged in separate chambers (20) of the pressure vessel (1) coaxially with the axis of the rolling piston on the side flanks (2') of the rotating piston (2). The heat exchangers (10-13) and the regenerators (14, 15) are arranged on the rotary pressure vessel (1) and the stationary heat source (3) is arranged in the region in which the heat exchanger (10) is incorporated between the chamber (6) and the regenerator (14). In another embodiment, the pressure vessel is stationary and the movement of the rotary piston is controlled by electromagnets.

IPC 1-7

F25B 9/14

IPC 8 full level

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